

REMARKS

Reconsideration and allowance of the subject application in view of the foregoing amendments and the following remarks is respectfully requested.

The specification has been amended based on the disclosure of the drawings and the original specification. Claims 1-21 were canceled, new claims 22-30 were added in order to traverse the rejection based on a double patenting.

All objections and rejections having been addressed, it is respectfully submitted that the present application should be in condition for allowance and a Notice to that effect is earnestly solicited.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 07-1337 and please credit any excess fees to such deposit account.

Respectfully submitted,

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MARKED-UP SPECIFICATION

~~METHOD AND APPARATUS FOR FAST IMAGE FETCHING AND PROCESSING~~

5 ~~FACSIMILE SYSTEM CAPABLE OF CONDUCTING SCAN AND FACSIMILE DIRECTLY DESCRIPTION~~

BACKGROUND OF THE INVENTION

10 A. Field of the Invention

~~The present invention relates to a method and apparatus for fast image fetching and processing, especially to a method and apparatus which is capable of capturing and processing scanned images of a document or an object.~~

15 ~~The present invention generally relates to a scanning system capable of
facsimiling the scanned image directly to other facsimile machines. The system is
based on an optical scanning machine combined with a facsimile module. The system
is therefore able to scan and facsimile the scanned image without using a personal
computer or activating any application programs previously installed in a
personal computer.~~

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B. Description of the Prior Art

~~In today's highly computerized office environment, convenience and easy-to-learn characteristics are two important factors when purchasing an office machine. Accordingly, whether an office machine has a user friendly interface becomes a
25 major concern for the consumers while selecting an office machine. Among those
office machines, the operations of optical image scanners can be roughly classified
into the following categories:~~

1. ~~Application program enabling type: The host computer will show all the
30 available drivers on the display for an end user to select. The user must manually
select the associated scanner driver and then press the scan function key to start the~~

pre-scan procedure. After that, the end user also needs to further select an area of interest (AOI) from the pre-scanned image so that the image information of the AOI can be read and sent to an associated application program for processing. Such image reading and processing operation sequence is very inconvenient to the end users, especially when they have done it repeatedly.

2. Function key enabling type: The user may press one of the function keys on the scanner to enable an associated application program. Then, all the available drivers will be displayed as a floating menu on the screen for the user to select. Then, the user can select the scan function from the floating menu to start the pre-scan procedure. After that, the user also needs to select an area of interest (AOI) from the pre-scan image to read the image data of the AOI and then send the image data to the application program for processing. However, this approach has only the advantage of partial automation at the very beginning when the user presses the function key on the scanner. The subsequent scanning operation procedure is basically the same. So, it is still not convenient enough in use.

In general, given these operations described above, the interfaces currently available for operating the scanners are still not convenient enough, especially for those who are not familiar with such office machines.

In a conventional facsimile operation, a telephone line must be set between two facsimile machines 11a, 11b, as shown in Figure 1. Since computer technologies are advanced, another type of facsimile utilization is shown in Figure 2. A computer (or a personal computer), an optical scanning device 13 and a driver and a facsimile module installed in the computer 12 are utilized. The integrated system of the optical scanning device 13 and the computer 12 may transmit facsimiles through Internet connection, MODEM, ISDN or other communication gateways to complete the facsimile transaction.

The general steps of the above-mentioned example are starting a facsimile program (such as the popular WinFax Pro), activating an image editing program (such

as PhotEdit), acquiring the image from a scanner, and sending the acquired image to others via a facsimile MODEM. In this instance, each step is needed in order to complete the facsimile process. Besides, the user is asked to get the facsimile programs and install it and the dedicated driver for the scanner to perform the facsimile job. The burden of the conventional process further include the installation of the hardware and the software of the MODEM, the network card (such as NE2000), the communication gateway (such as the Internet MODEM, ISDN or ADSL) in order complete the final facsimile process in communication.

Though there is a scanner in the market having a facsimile button. The user would press down the facsimile button to activate a facsimile program previously installed in the computer to start facsimiles. This kind of device still needs a computer, a facsimile program, an image editing program and a driver for the scanner to perform the facsimile job. The user also has to install the needed programs before conducting the first facsimile. The installation includes many setups, parameters, and tests. The usage is complicated and not easy for a new user.

SUMMARY OF THE INVENTION

Accordingly, it is an object of the present invention to provide a method and apparatus for fast image fetching and processing which provides a one-touch operation for an user to automatically initiate a series of actions previously defined, thereby to finish the associated jobs of scanning, printing, sending fax, or e-mails.

In a computer network including at least a host computer, a modulation/demodulation device (MODEM), a printer, and an optical scanner, the user only needs a one-touch operation to use these devices for scanning, printing, fax, e-mail or OCR. The user can press the scan function key on the scanner to read the image information of a document placed on the scanner. When the user presses the print function key on the scanner, the printer will print the image information of the document placed on the scanner. When the user presses the fax function key on the

scanner and then keys in the fax number of the receiver, the image information of the document placed on the scanner will be sent to the associated receiver. When the user presses the e-mail function key on the scanner and then keys in the e-mail address of the receiver, the image information of the document placed on the scanner will be sent to the receiver as an attachment. When the user presses the Optical Character Recognition (OCR) function key on the scanner, the image information of the document placed on the scanner will be automatically analyzed by an associated OCR application program. To sum up, all these operations require only one touch on the function key of the scanner, thereby make the operation of the scanner and associated office machines more conveniently and efficiently.

It is therefore an object of the present invention to provide a scanning system capable of directly conducting the facsimile. By help of a predetermined communication gateway, the present invention is able to scan a document and send a facsimile of the document without opening any application programs, when the user pushes the facsimile button.

It is another object of the present invention to provide a facsimile module which is able to complete the integrated processes among the computer, the optical scanning device and the communication gateway. When the user installs the facsimile module in a computer, the facsimile module is able to drive the optical scanning device and the computer to conduct the facsimile request completely.

The facsimile system includes a computer (a personal computer or a notebook computer), an optical scanning device with an implemented facsimile button, a facsimile module capable of driving the optical scanning device, Internet communication, MODEM, ISDN or ADSL protocols. When the facsimile module is installed to the computer, the facsimile module is able to determine automatically or by previous setup the communication gateway, in order to communicate with another computer supporting the determined communication gateway.

BRIEF DESCRIPTION OF THE DRAWINGS

~~These and other objects and advantages of the present invention will become apparent by reference to the following description and accompanying drawings wherein:~~

5 ~~Fig. 1 is a schematic diagram showing the computer network implemented with the inventive apparatus for fast image fetching and processing.~~

~~Fig. 2 is a schematic diagram showing an application program for image processing.~~

10 ~~Fig. 3 is a schematic diagram showing an application program for e-mail transmission.~~

~~Fig. 4 is a flow chart showing the scan procedure according to the method of the invention.~~

~~Fig. 5 is a flow chart showing the print procedure according to the method of the invention.~~

15 ~~Fig. 6 is a flow chart showing the fax procedure according to the method of the invention.~~

~~Fig. 7 is a flow chart showing the e-mail procedure according to the method of the invention.~~

20 ~~Fig. 8 is a flow chart showing the OCR procedure according to the method of the invention.~~

The foregoing and other objects, aspects and advantages will be better understood from the following detailed description of a preferred embodiment of the invention with reference to the drawings, in which:

25 Figure 1 shows a prior known facsimile machine conducting a facsimile communication to another facsimile machine;

Figure 2 depicts a prior known integration of a computer and a scanner;

Figure 3 shows a functional block diagram of a facsimile system according to an embodiment of the present invention;

30 Figure 4 depicts a flow chart of operation according to an embodiment of the

present invention;

Figure 5 shows the steps to set up a communication gateway according to an embodiment; and

5 Figure 6 shows a functioned block diagram of a second embodiment of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

10 A preferred embodiment of the invention is described below. This embodiment is merely exemplary. Those skilled in the art will appreciate that changes can be made to the disclosed embodiment without departing from the spirit and scope of the invention.

15 ~~As illustrated in Fig. 1, a computer networks includes a host computer 10, and various output units, including: a MODEM 20, a printer 30, a scanner 40 and a display 50. The host computer 10 has a buffer 11, a driver 12, a control key configuration file 13, and various application programs 14 associated with the commands in the control key configuration file 13. The control key configuration file 13 can be repeatedly used after initial configuration. The scanner 40 is~~
20 ~~communicated with the host computer 10. On the housing of the scanner 40, there are multiple control keys 41-45, each controlled by an associated command defined in the control key configuration file 13. When pressing any control key 41-45, the associated driver 12 defined in the commands of the control key configuration file 13 will be enabled. Then, the scanner 40 will be driven by the driver 12 to read the~~
25 ~~image information of the object placed on the scanner 40 and convert it into digital image data. The digital image data will then be saved in the buffer 11. The digital image file will then be loaded into an associated application program 14 defined in the control key configuration file 13. The execution result of the application program 14 will be displayed in the output unit connected to the host computer 10.~~
30 ~~Accordingly, the user only needs one touch key operation to operate the job of image~~

fetching and processing according to the commands defined in the control key configuration file 13.

For example, when the scan function key 41 of the scanner 40 is pressed, an
5 associated driver defined in the commands of the control key configuration file 13
will be enabled, thereby to read the image information of the object placed on the
scanner 40. The scanned image of the object will then be converted into digital image
data and saved in the buffer 11. The scanned image of the object will also be loaded
into an associated application program defined in the commands of the control key
10 configuration file 13, such as Photoshop. The image file will also be opened by an
application program 14 and shown on a displayed 50 of the communicated host
computer 10, as illustrated in Fig. 2. During the scanning procedure, the percentage
of completion will also be displayed on the screen 50.

Moreover, when the print function key 42 of the scanner 40 is pressed, the
15 driver 12 associated with the commands defined in the control key configuration file
13 will be enabled, such as MiniDriver, thereby drive the optical module of the
scanner 40 to read the image information of the object placed on the scanner 40. The
scanned image will then be saved as digital image data in the buffer 11. When print
out the image of the object, the driver 12 will compare the resolution (Dot Per Inch,
20 DPI) of the printer 30 with the scanned image to convert the scanned image to an
output file in equal proportional. And then, the image file will be output from the
printer 30 in the computer network. Also, during the scanning procedure, the display
50 will show the percentage of completion on the display 50.

25 When the fax function key 43 on the scanner 40 is pressed, the driver 12
associated with the commands defined in the control key configuration file 13 will be
enabled, such as MiniDriver, thereby drive the optical module of the scanner 40 to
read the image information of the object placed on the scanner 40. The image data is
then saved in a buffer 11 and then loaded in an application program 14 associated
30 with the command defined in the control key configuration file 13. The user may use
the software keyboard on the display or use the digit buttons on the housing of the
scanner 40 to key in the fax number of the receiver. After that, the image file

~~previously loaded in the application program can be sent to the MODEM 20 in the computer network to send the scanned image to the receiver. The screen 50 will show the progress of the scanning job.~~

5 ~~When the e-mail function key 44 on the scanner 40 is pressed, the driver 12 associated with the commands defined in the control key configuration file 13 will be enabled, such as MiniDriver, thereby drive the optical module of the scanner to read the image information of the object placed on the scanner 40. The image data is then saved in a buffer 11 and then loaded as an attachment in an application program 14~~
10 ~~associated with the commands defined in the control key configuration file 13, such as Microsoft Outlook, as illustrated in Fig. 3. After the user types the e-mail address of the receiver, the image file will be sent as an attachment by the application program 14 and then sent to the receiver via the MODEM 20 in the computer network. Also, the screen 50 will show the progress of the scanning job.~~

15 ~~When the Optical Character Recognition (OCR) function key 45 on the scanner 40 is pressed, the driver 12 associated with the commands defined in the control key configuration file 13 will be enabled, such as MiniDriver, thereby drive the optical module of the scanner 40 to read the image information of the object placed on the~~
20 ~~scanner 40 for OCR process. The image data is then saved in a buffer 11 and then loaded in an OCR application program 14 associated with the command defined in the control key configuration file 13. The image file will be opened by the OCR application program 14 for character recognition. The screen 50 will show the percentage of the completion for the scanning job.~~

25 ~~As illustrated in Fig. 4, the inventive method for image fetching and processing can be explained in more details as follows: When the user wishes to scan the image of an object, he presses the scan function key (101), the driver (Mini Driver) will receive the message of the scan action (102). The driver will send the scan message to a watch routine (103). After that, the watch routine will send the scan message to Panel Control Module (104). The Panel Control Module Control Module loads ScanObj.dll and sends the scan command (105). The ScanObj.dll will send the~~
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message to the driver and request the driver to perform the scan action (106). During the scan procedure, the Panel Control Module Control Module will illustrate the graph showing the percentage of completion. When the scan job is finished, the driver transmits the scanned image to ScanObj.dll (107). ScanObj.dll then transmits the scanned image of the object to the Panel Control Module Control Module (108).
5 The Panel Control Module Control Module then saves the scanned image of the object as a file (109), and then calls the application program to open the scanned image file of the object (110).

10 As illustrated in Fig. 5, the inventive method for image fetching and processing can be explained in more details as follows: When the user wishes to scan the image of the scanned object and then presses the copy function key (201), the Mini Driver will receive the message of the print action (202). The driver then sends the message of the print action to the Watch routine (203). After that, the Watch routine forwards the message of the print action to Panel Control Module Control Module (204). Panel
15 Control Module Control Module then loads ScanObj.dll and sends a scan command (205). ScanObj.dll sends a command to the driver and requests the driver to begin the scan action (206). At the same time, the Panel Control Module Control Module will show the percentage of the completion of the scan action. After the scan is
20 finished, the driver sends the scanned image of the object to ScanObj.dll (207). ScanObj.dll then sends the scanned image of the object to Panel Control Module Control Module (208). After comparing the resolution of the printer with the scanned image, the Panel Control Module Control Module sends the scanned image of the object to a target printer in equal proportion (209). The printing action starts from the
25 right top corner of the document and then outputs the scanned image of the object in equal proportion

As illustrated in Fig. 6, the inventive method for image fetching and processing can be explained in more details as follows: When the user wishes to scan the image
30 of the scanned object and then presses the fax function key (301), the Mini Driver will receive the message of the fax action (302). The driver then sends the message of the fax action to the Watch routine (303). After that, the Watch routine sends the

message of the fax action to Panel Control Module Control Module (304). Panel Control Module Control Module then loads ScanObj.dll and sends a scan command (305). ScanObj.dll sends a scan command to the driver and requests the driver to begin the scan action (306). During the scan procedure, the Panel Control Module Control Module will show the percentage of the completion of the scan action. After the scan is finished, the driver sends the scanned image of the object to ScanObj.dll (307). ScanObj.dll then sends the scanned image of the object to Panel Control Module Control Module (308). Panel Control Module Control Module then saves the scanned image of the object as a file (309). After the key in the fax number of the receiver, the image file of the scanned object is sent to the receiver via fax (310).

As illustrated in Fig. 7, the inventive method for image fetching and processing can be explained in more details as follows: when the user wishes to send the image of the scanned object via e-mails and then presses the email function key (401), the Mini-Driver will receive the message of the e-mail action (402). The driver then sends the message of the e-mail action to the Watch routine (403). The Watch routine then sends the message of the e-mail action to Panel Control Module (404). Panel Control Module then loads ScanObj.dll and sends an e-mail transmission command (405). ScanObj.dll sends a command to the driver and requests the driver to begin the scan action (406). During the scan procedure, the Panel Control Module will show the progress of the scan action. After the scan action is finished, the driver sends the image of the scanned object to ScanObj.dll (407). ScanObj.dll then sends the scanned image to Panel Control Module (308). The Panel Control Module saves the scanned image as an image file (409). The Panel Control Module opens the e-mail application program to send a new email with the scanned image file as an attachment (410). After typing the e-mail address of the receiver, the e-mail will be sent.

As illustrated in Fig. 8, the inventive method for image fetching and processing can be explained in more details as follows: when the user wishes to scan the image of an object and then presses the OCR function key (501), the Mini-Driver will receive the message of the OCR action (502). The driver then sends the message of the OCR action to the Watch routine (503). The Watch routine then sends the

message of the OCR action to Panel Control Module (504). Panel Control Module then loads ScanObj.dll and sends a scan command (505). ScanObj.dll sends a command to the driver and requests the driver to begin the scan action (506). At the same time, Panel Control Module will show the progress of the scan action. After the scan is finished, the driver sends the scanned image to ScanObj.dll (507). ScanObj.dll then sends the image of the scanned object to Panel Control Module (508). Panel Control Module saves the scanned image as an image file (509), and calls the associated OCR application program to perform image recognition and then save the result as a text file. After that, a text editor program, such as Microsoft Word, can be called to open the text file for edition (510).

In addition to operating the function keys on the scanner, the user can also perform the above mentioned actions by operating on the Panel Control Module from the screen. The Panel Control Module can be updated by downloading a new version from the Internet. The new Panel Control Module allows the user to perform any action associated with the above mentioned jobs.

To sum up, the inventive method and apparatus provides an efficient user interface for image fetching and processing. The one touch operation of the user interface allows the user to perform scan, print, fax, e-mails, or OCR action by just a single key operation, thereby to make the operations on the office machines more conveniently and efficiently.

It should be understood that various alternatives to the structures described herein may be employed in practicing the present invention. It is intended that the following claims define the invention and that the structure within the scope of these claims and their equivalents be covered thereby.

With reference to Figure 3, the facsimile system has a scanner 20 (a flatbed scanner or a sheet-fed scanner) with a facsimile button 21 implemented on the scanner 20, a computer 30 and a facsimile module 40. The facsimile button 21 may be a click button or a touch panel showing a button image. The computer 30 may be 20 a

personal computer or a notebook, connected to the scanner 20 via a communication port and including an Internet connection, MODEM, an ISDN MODEM or other communication gateway. The facsimile module 40 includes a driver 41, a communication management program 42 for supporting the protocol of the communication gateway mentioned in the above. The protocol support includes the Internet program 43, MODEM driver 44, or ISDN program 45.

The facsimile module is stored in a media device such as a CD, a hard disk, memory module or a floppy disk and is able to be executed if the facsimile button 21 is pushed down to instruct the computer 30 to complete the facsimile.

As shown in Figure 4, the operation of the present invention is demonstrated. When the user pushes the facsimile button 21 of the scanner 20 (step 1), the facsimile system will dial a predetermined phone number or establish a connection to a predetermined email address for the email-fax gateway (step 2) . Then send the image acquired from the scanner 20 to the destination via a determined communication gateway (step 3).

Please refer to Figure 5, the step further includes determining the communication gateway (step 1a), establishing a connection from the communication gateway to the corresponding receiver (step 1b) and scanning and acquiring the image of a document (step 1 c). Once the user pushes the facsimile button 21 of the scanner 20, the communication management program 42 of the facsimile module 40 will automatically detect the already installed communication gateway (such as the Internet connection, MODEM or ISDN) and determine the priority of each available communication gateway. The user is also able to set the predetermined communication gateway for a versatility purpose upon installation. The step 1b is for establishing the connection of the available Internet program 43, MODEM driver 44, or ISDN program 45. In step 1c, the communication management program 42 activates the driver 41, through a scanner 20 to acquire the image of a document and then store the image in a media storage as an electrical file.

As the demonstration of step 2 shown in Figure 4, the computer may pop up a window for asking the user to enter the phone number or the email address. Alternatively, there may be implemented a numeric keypad 22 on the scanner 20 for entering purposes.

- 5 In the last step 3 of Figure 4, the communication management program 42 will activate a communication subroutine to send the acquired image to the receiver via a supported connection of Internet, MODEM, ISDN or other communication gateway.

- 10 Therefore, the communication management program 42 is the core of the facsimile module 40 for the reasons that it determines the type of communication gateway, establishes the connection of the determined communication gateway, executes the scanning and acquires the image and complete the dialing if needed or sending the facsimile. In this case, the present invention eliminates the burdensome installation and activation of different application programs. Accordingly, the present invention simplifies the facsimile process and provides convenient achievements to
- 15 the user.

- 20 Although preferred embodiments of the present invention have been described in the forgoing description and illustrated in the accompanying drawings, it will be understood that the invention is not limited to the embodiments disclosed, but is capable of numerous rearrangements, modifications, and substituting of parts and elements without departing from the spirit and scope of the invention. Accordingly, the present invention is intended to encompass such rearrangements, modifications, and substitutions of parts and elements as fall within the scope of the appended claims.

ABSTRACT

~~A method and apparatus for fast image fetching and processing is provided to scan an object more efficiently by a one touch operation. The method and apparatus allows a one touch operation to initiate a series of actions previously defined in a configuration file for each function key, including scan, print, facsimile, e-mail or OCR, thereby provide a more user friendly interface for operating the office machine.~~

10 The present invention relates to a facsimile system capable of conducting scan and facsimile, includes a scanner with a facsimile button, a driver, and a facsimile module having an Internet communication program, a MODEM communication program, an ISDN communication program and a communication management program. When a user pushes the facsimile button, the scanner will scan and acquire
15 the image of a document. The image is further be sent out as a facsimile via a communication gateway.

FIG. 1

- 30: PRINTER
- 20: MODEM
- 5 50: DISPLAY
- 40: SCANNER
- 10: HOST COMPUTER
- 12: DRIVER
- 11: BUFFER
- 10 14: APPLICATION PROGRAM
- 13: CONTROL KEY CONFIGURATION FILE

FIG. 4

- 15 101: PRESS SCAN FUNCTION KEY
- 102: DRIVER ENABLED
- 103: DRIVER SENDS A MESSAGE TO WATCH
- 104: WATCH SENDS THE MESSAGE TO PANEL CONTROL MODULE
- 105: PANEL CONTROL MODULE LOADS SCANOBJ.DLL AND SENDS
- 20 A SCAN COMMAND
- 106: DRIVER LOADS SCANOBJ.DLL AND REQUESTS THE DRIVER TO SCAN
- 107: DRIVER SENDS THE IMAGE TO SCANOBJ.DLL
- 108: SCANOBJ.DLL SENDS THE IMAGE TO PANEL CONTROL
- 25 MODULE
- 109: PANEL CONTROL MODULE SAVES THE IMAGE AS A FILE
- 110: PANEL CONTROL MODULE ENABLES AN APPLICATION PROGRAM TO OPEN THE SCANNED IMAGE FILE

30 FIG. 5

- 201: PRESS PRINT FUNCTION KEY

202: DRIVER ENABLED
203: DRIVER SENDS A MESSAGE TO WATCH
204: WATCH SENDS THE MESSAGE TO PANEL CONTROL MODULE
205: PANEL CONTROL MODULE LOADS SCANOBJ.DLL AND SENDS
5 A SCAN COMMAND
206: DRIVER LOADS SCANOBJ.DLL AND REQUESTS THE DRIVER TO
SCAN
207: DRIVER SENDS THE IMAGE TO SCANOBJ.DLL
208: SCANOBJ.DLL SENDS THE IMAGE TO PANEL CONTROL
10 MODULE
209: PANEL CONTROL MODULE SENDS THE IMAGE TO A PRINTER
210: THE PRINTER PRINTS THE IMAGE

FIG. 6

15 301: PRESS FAX FUNCTION KEY
302: DRIVER ENABLED
303: DRIVER SENDS A MESSAGE TO WATCH
304: WATCH SENDS THE MESSAGE TO PANEL CONTROL MODULE
305: PANEL CONTROL MODULE LOADS SCANOBJ.DLL AND SENDS
20 A SCAN COMMAND
306: DRIVER LOADS SCANOBJ.DLL AND REQUESTS THE DRIVER TO
SCAN
307: DRIVER SENDS THE IMAGE TO SCANOBJ.DLL
308: SCANOBJ.DLL SENDS THE IMAGE TO PANEL CONTROL
25 MODULE
309: PANEL CONTROL MODULE SENDS THE IMAGE AS A FILE
310: MODEM TRANSMITS THE IMAGE FILE TO A RECEIVER

FIG. 7

30 401: PRESS EMAIL FUNCTION KEY
402: DRIVER ENABLED
403: DRIVER SENDS A MESSAGE TO WATCH

404: WATCH SENDS THE MESSAGE TO PANEL CONTROL MODULE
405: PANEL CONTROL MODULE LOADS SCANOBJ.DLL AND SENDS
A SCAN COMMAND
406: DRIVER LOADS SCANOBJ.DLL AND REQUESTS THE DRIVER TO
5 SCAN
407: DRIVER SENDS THE IMAGE TO SCANOBJ.DLL
408: SCANOBJ.DLL SENDS THE IMAGE TO PANEL CONTROL
MODULE
409: PANEL CONTROL MODULE SENDS THE IMAGE AS A FILE
10 410: PANEL CONTROL MODULE INITIATES A NEW EMAIL AND
SENDS THE IMAGE FILE AS AN ATTACHMENT

FIG. 8

501: PRESS OCR FUNCTION KEY
15 502: DRIVER ENABLED
503: DRIVER SENDS A MESSAGE TO WATCH
504: WATCH SENDS THE MESSAGE TO PANEL CONTROL MODULE
505: PANEL CONTROL MODULE LOADS SCANOBJ.DLL AND SENDS
A SCAN COMMAND
20 506: DRIVER LOADS SCANOBJ.DLL AND REQUESTS THE DRIVER TO
SCAN
507: DRIVER SENDS THE IMAGE TO SCANOBJ.DLL
508: SCANOBJ.DLL SENDS THE IMAGE TO PANEL CONTROL
MODULE
25 509: PANEL CONTROL MODULE SENDS THE IMAGE AS A FILE
510: PANEL CONTROL MODULE ENABLES AN APPLICATION
PROGRAM TO PERFORM IMAGE RECOGNITION AND THEN SAVE
THE RESULT AS A TEXT FILE AND OPEN AN EDITOR TO EDIT THE
TEXT FILE

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